Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	**)**	
	)	**WT 16-239**
Amendment of Part 97 of the	**)**	**RM-11708**
Commission's Amateur Radio Service	**)**	**RM-11759**
Rules to Facilitate High-Frequency	**)**	**17-344**
Data Communications	**)**	

To: The Chief, Wireless Telecommunications Bureau
Via: Office of the Secretary

12/14/18 REPLY COMMENTS TO ARSFI 12/6/2018

I, Janis Carson, AB2RA, wish to reply to the ARSFI comments FCC ID: 120566997404
https://ecfsapi.fcc.gov/file/120566997404/ARSFI_Comments.pdf
and briefly reply also to the following in comments:
https://www.fcc.gov/ecfs/filing/12070210003806
https://www.fcc.gov/ecfs/filing/1207114347495

A. INTRODUCTION:

1. We can all agree that the discussion of this matter has gone on far too long, and nothing new and productive will surface by prolonging it. The FCC should act immediately and close these proceedings.

2. We can all agree the baud rate rule is obsolete, but it should not be abolished until an effective alternative is devised. I plan to focus on issues germane to the FCC 16-239 instructions for filing comments. This recent ARSFI statement in the filing referenced above clearly shows that unfortunate individual focus on specific SCS Pactor modem technical characteristics does not recognize the rapid pace of advancement of the radio art: “Since then, technical advancements in modulation, coding technology and Digital Signal Processing (DSP) now make it possible to implement significantly faster, more robust digital protocols with better spectrum efficiency (e.g. PSK31/63, MT63, Pactor 2, Pactor 3, WINMOR, ARDOP, VARA, Pactor 4, and other popular amateur modes).” I pointed out in earlier filings that SCS Pactor 4 modems are already obsolete for purposes other than Sailmail, its original use. It is unfortunate that so much grant money has been spent on these SCS modems rather than STANAG, which would have provided better interoperability. Unlike the proprietary and expensive SCS Pactor 4 hardware modems, ARDOP is open source code and free to down load, making its product much more accessible to potential users. The lack of wide spread possession of SCS Pactor 4 Modems makes it difficult to conduct emergency communications, making it necessary to ship them into disaster zones. The ARRL failed in Puerto Rico to provide the Pactor 4 modems to its Force of 50 team, in spite of request for an STA to allow Pactor 4. Those deployed had to redefine the mission to fulfill more urgent objectives to serve the public good. The Winlink web site states that ARDOP will be different: “The protocol design is open, and the software implementations will be open-sourced.... And you can expect advances in speed and efficiency in noisy, multi-path propagating channels, and effective busy-channel detection to minimize the chance of interference with other communications. ” https://winlink.org/tags/ardop For the sake of the public good, I hope they are

correct about this new mode which will replace SCS modems very soon. Regulation needs to allow for this rapid change.

3. We can all agree that emergency communications are necessary and desirable. We can all agree that the FCC should promote the most effective means of accomplishing that goal, including modern interoperable modes such as STANAG to encourage cooperation between amateur operators and government agencies. I have seen no filings stating that they oppose emergency communications. To characterize comments opposing 16-239 in its current form as also opposing emergency communications is a logical fallacy (Lovejoy's Law). Proper FCC regulatory action will protect the legitimate emergency communications from "congestion" of the spectrum and the email systems by non emergency commercial email users. I filed a petition to expedite the use of wide band modes like STANAG: https://ecfsapi.fcc.gov/file/120762254440/FCCpetitionRACESdigital.pdf

4. In Puerto Rico hearings 17-344, the Moloney comment reports the overstatement of Pactor 4 use: https://ecfsapi.fcc.gov/file/1012254347531/FCC%20comment%20PS%20docket%2017%20344.pdf "The use of Pactor 4 for amateur radio was approved but since we had no Pactor modems it was not used."

5. This filing is significant too: https://ecfsapi.fcc.gov/file/10305432312740/180210301-1.pdf First, the FCC held this, then allowed it to be entered later into the record as from a credible source. Second, the person "anonymous" is possibly risking his career in testifying about Puerto Rico. His stunning conclusion: "It is recommended that an outside organization, away from the ARRL research and develop a methodology that can improve this valuable emergency response resource for the national good." Many of these 17-344 reports about Puerto Rico communications demonstrate that Pactor 4 was not the method of choice that solved all problems.... Balloons with cellular service from Google were an innovation that solved problems, from the marketplace. That is an example of a Special Temporary Authorization (STA) that had real quantifiable results. With this method, users in disaster areas can employ their own mobile devices to communicate directly with their loved ones, rather than sending an antique Western Union style telegram or radiogram via Winlink.

6. The ARRL's disproportionate focus on Winlink Pactor 4 for emergency communications does not justify ignoring serious underlying problems with 16-239 to blindly adopt its deeply flawed petition. It doesn't merit establishing 100 email channels on 40 meters per Waterman comments.

7. The important take away is that this entire discussion of the ability to decode ARQ style transmissions is very important, but off topic from the clear directives of the FCC in its instructions: "While we tentatively conclude that a specific bandwidth limitation for RTTY and data emissions in the MF/HF bands is not necessary, we nonetheless request comment on whether we should establish emission bandwidth standards for amateur service MF/HF RTTY and data emissions. Commenters favoring such action should address what the maximum bandwidth should be, the basis for the particular limitation the commenter proposes, and whether the limit should apply across the bands or only in particular subbands. Commenters should explain the grounds for departing from the generally applicable standards."

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B. PROBLEMS WITH CURRENT 16-239:

I therefore return to the germane issues 16-239 seeks to rule on.

1. The FCC, ARRL, ARSFI, and Winlink supporters have one view, to abolish the 300 baud restriction for HF, and replace it with either no band width limit on transmissions, or maybe an approximately 3 KHz band width limit, and apply that rule throughout the entire HF DATA segments. The ARRL stated in its final filing that could result in the usurpation of the entire DATA segment. Neither the FCC nor the original petitioner, ARRL, offered anything to mitigate that outcome. To regulate by band width instead of by band segment positively will not work.

2. The following quotes from their final comment prove that in their own words:
https://ecfsapi.fcc.gov/file/1011120327463/Comments%20of%20ARRL%20on%20NPRM%2010112016%20FINAL.pdf
PAGE 4: "while protecting dissimilar emission types and incumbent users from interference from wide-bandwidth data emissions that simply cannot be accommodated in the RTTY/data subbands,"
ARRL POINT NUMBER 11: FOOTNOTE 17: "STANAG has a data speed of between 2400 and 9600 bits per second." "At the same time, it is clearly not desirable to have a few data stations using large swaths of spectrum for a single emission to the detriment of simultaneous use by other stations using other, narrower bandwidth emission modes...However, it could also be said fairly that the drawbacks of the same action outweigh the benefits."
ARRL: "It (FCC)noted that only the digital codes specified in Section 97.309(a) may be used for MF/HF data emissions, footnote 22"
"FOOTNOTE 22 The fact is that pursuant to Section 97.309(a), a data emission using a digital code specified in that section can use "any technique whose technical characteristics have been documented publicly…(examples omitted) for the purpose of facilitating communications. This is a very flexible enabling provision and not a limiting one. It does not preclude one or a few stations from usurping the entire HF subband with one emission or a few emissions."
ARRL PAGE 14 & 15, ITEM18: "In the specific context of the admixture of data and other modes in the HF and MF bands, reliance solely on voluntary band planning is expecting quite a lot....But just as increased automobile traffic in urbanized areas necessitates not only driver courtesy but also some traffic signals, increased use of data emissions in the HF and MF data and RTTY subbands necessitates adherence by licensees not only to voluntary band plans but also adherence to some fixed limits that (1) prevent a few individuals from usurping the entire band and (2) ensure basic access by all."
ARRL END OF PAGE 18. ARRL ITEM 24: "However, even 2.8 kHz could arguably permit usurpation of the subbands to the detriment of CW and other narrow bandwidth emissions."
"At the same time, it would not be desirable to have a few data stations using large swaths of spectrum to the detriment of other modes."

3. The FCC should reject the ARRL method of regulation by 2.8 KHz band width, as well as the proposed elimination of any band width specifications anywhere in the HF DATA segments as proposed in the current 16-239 since they are ineffective in "mitigating" "congestion" and will impose "costs" to all users, *including the emergency communicators*. Either approach departs from "generally applicable standards" expressed in IARU band plans.

4. The FCC also intends in 16-239 to eliminate HF transmission band width limits, *while retaining 20 KHz and 100 KHz for VHF and UHF respectively, which is inconsistent* and fails to adhere to good engineering practice and international agreements. The entire aggregate HF spectrum fits easily into just one VHF band assignment. I pointed out those problems in a petition to reject the "unlimited band width everywhere" plan as written, or implement it "by band segment" mode, as also allowed.
See: https://ecfsapi.fcc.gov/file/1116853100153/petition2%20%20to%20dismiss%2016-239.pdf
https://ecfsapi.fcc.gov/file/1005214251324/FCC%2016-239%20DISMISSorSTAY1.pdf

With unlimited band width limit emissions allowed *anywhere* in the HF DATA segments, 16-239 is the most radical and destructive rule change the amateur service has ever seen, and it will fail to deliver promised goals besides.

C. HOW TO MAKE 16-239 WORK FOR EVERYONE:

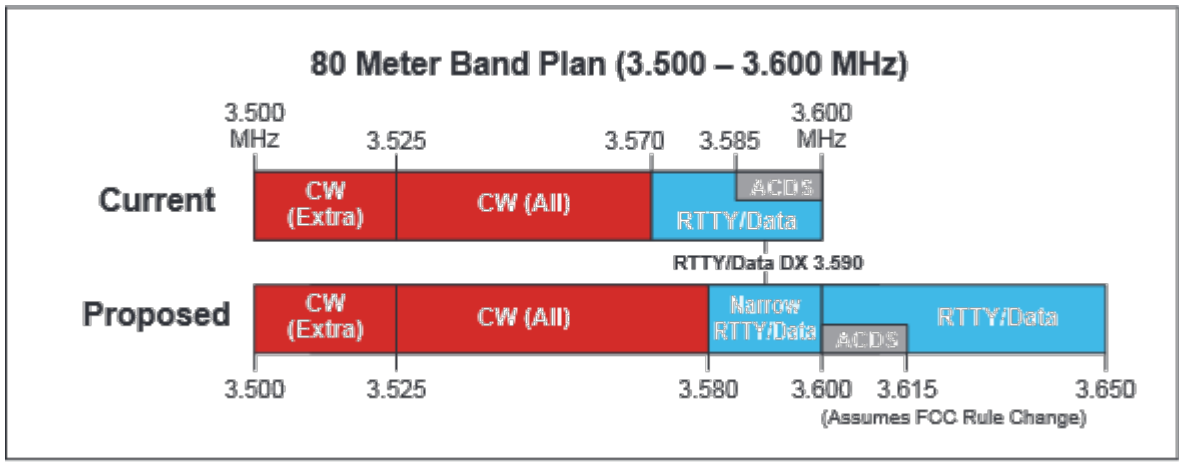
1. The FCC also allowed in its 16-239 instructions for unlimited band width limit transmissions within certain band segments, to separate incompatible emissions and mitigate congestion and interference. This method is more effective, because it protects both automatic wide band and manual narrow band modes from each other. *This method does not preclude the FCC's preference to deregulate band width or specific mode descriptions inside the automatic control segments used for HF email, it enables it to be implemented in a more effective fashion.* The ARRL's insistence on a 2.8 KHz band width set by obsolete transceiver band width technology rather than the realities of emerging Software Defined Radio (SDR) guarantees that *the FCC will have to revisit this issue again, very soon*. This "by band segment" method has not received due consideration. The ARRL generated a band plan chart at the outset of this process, which I have referred to in previous filings. I recommend ARRL's band plan, rather than 2.8 KHz band width, which fails to provide protection from interference for anyone.

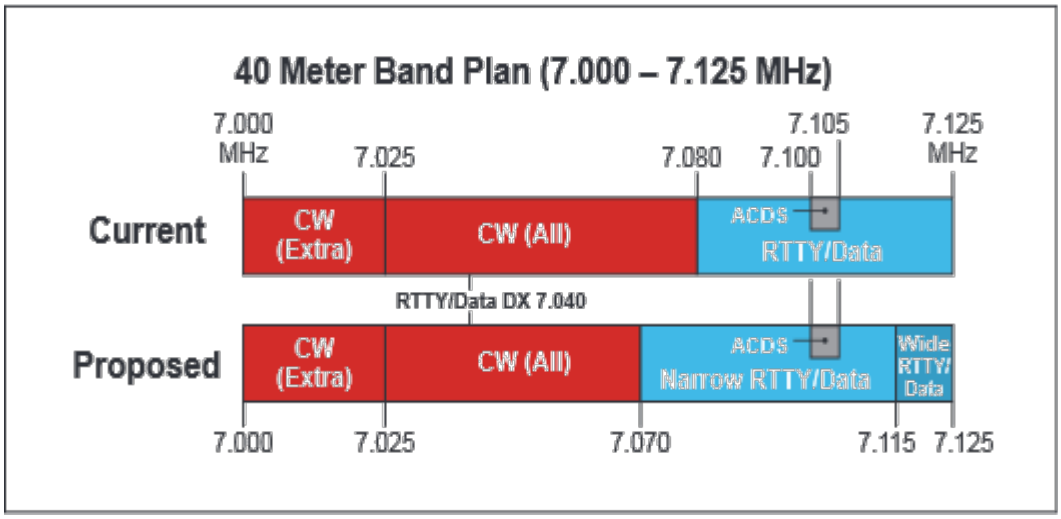
2. The many 16-239 commenters' objections point out the failure, on a practical level, of either ARRL's 2.8 KHz band width everywhere in the DATA segment, or the FCC's unlimited band width everywhere in the DATA segment to protect either the existing human to human contacts or the automatic email store and forward operations. The separation of peer to peer contacts from automatic unmanned email store and forward is essential to any solution the FCC devises. Even with a 2.8 KHz band width limit, there is nothing in the proposed rule making to prevent someone from "ganging" a group of 2.8 KHz transmissions together to get faster data transfer, which would occupy an entire HF DATA segment. This is similar to a wider mode of STANAG. There is a real possibility that someone outside Winlink or ARRL will build HF email store and forward operations that will usurp the entire spectrum. Unless carefully regulated, it will be very hard to unravel after that happens.

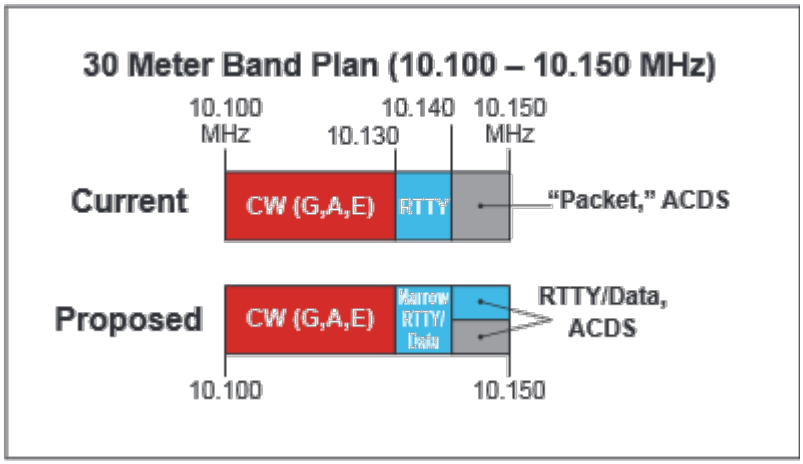
D. HOW TO IMPLEMENT THE "BY BAND SEGMENT" OPTION:

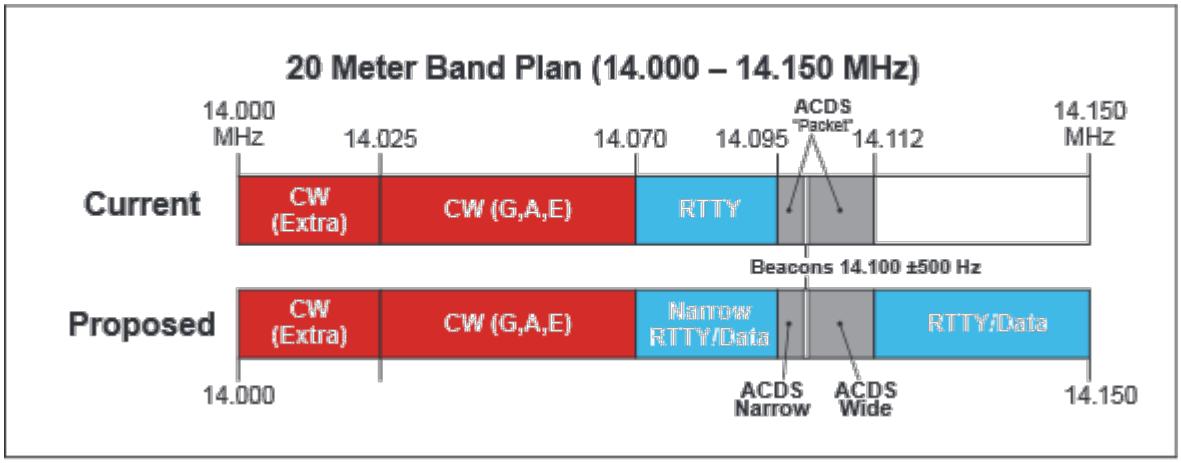
1. Here is a quick way to get to "YES". I have previously commented that the FCC should adopt the band plan into Part 97 rules that set all this in motion, ARRL's very own HF band plan proposal, as a "by band segment" approach that is allowed for in the FCC 16-239 instructions. This is the most direct way to include the many narrow band commenters requesting mitigation by "band segment" method without negative impact on the true emergency communication users. This allows the FCC to chose either the ARRL recommended 2.8 KHz or the FCC no band width limitation method, within those band segments. The FCC should formalize it as Part 97 rules, not a voluntary band plan, which has no enforcement tools. The ARRL admits voluntary plans will not work. The ARRL will be in the awkward position of arguing against its own proposal, if it objects to this solution. http://www.arrl.org/files/file/About%20ARRL/Committee%20Reports/2015/January/SUMNER%20QS4.pdf **NOTE: CW means Narrow RTTY/Data such as FT8** (Bandwidth of no more than 500 Hz) or Morse Telegraphy, and does not grant Tech DATA privileges.

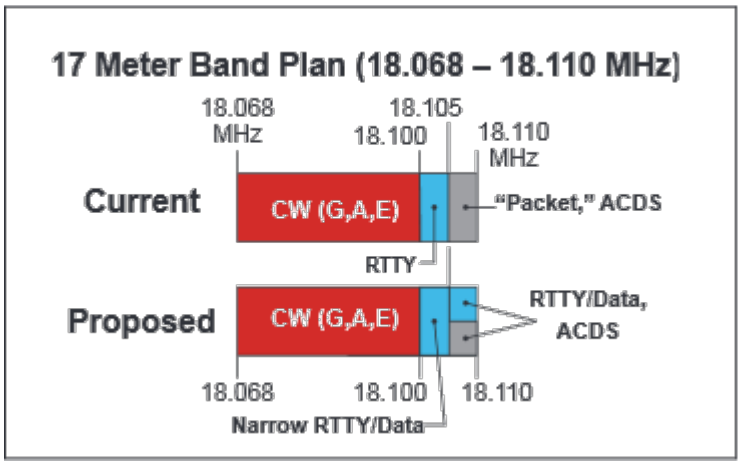
2. Here is a chart of 80 meters, which assumes RM-11759 band plan components are adopted, but the license restructuring components in it are rejected because ARRL has a new separate licensing petition that now supersedes it. That licensing element is too important to allow its possible advantages to be ruined by muddling them with 16-239 band planning.

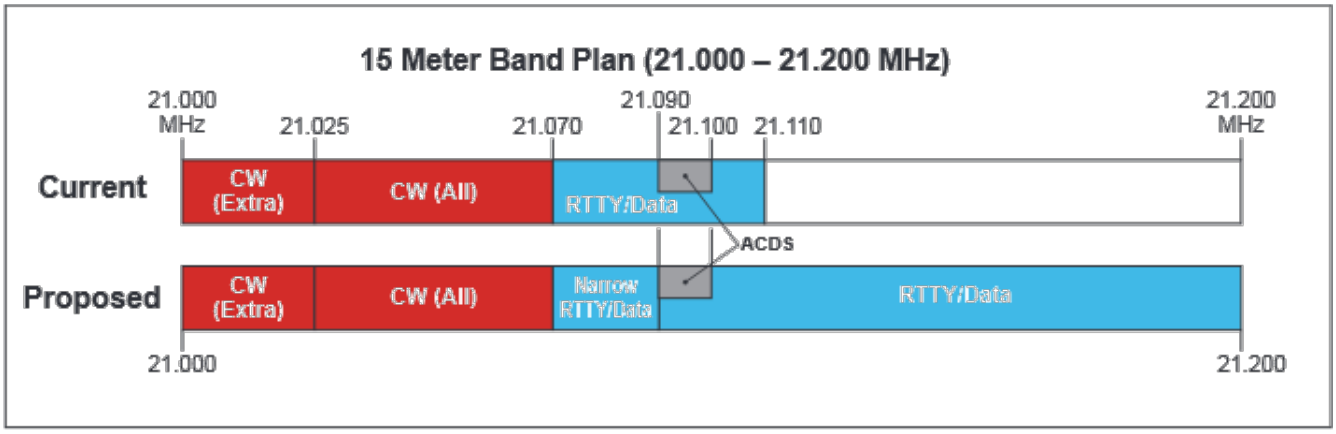

80 Meter Band Plan (3.500 – 3.600 MHz)
3.500 MHz
3.525
3.570
3.585
3.600 MHz
Current
CW (Extra)
CW (All)
ACDS
RTTY/Data
RTTY/Data DX 3.590
Proposed
CW (Extra)
CW (All)
Narrow RTTY/Data
ACDS
RTTY/Data
3.500
3.525
3.580
3.600
3.615
3.650
(Assumes FCC Rule Change)

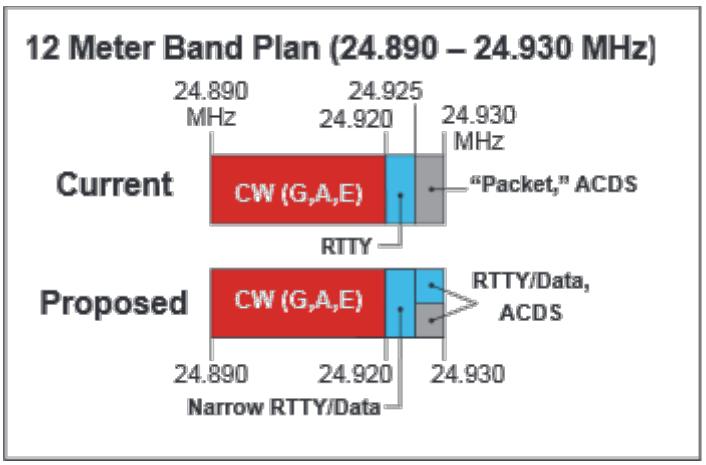

40 Meter Band Plan (7.000 – 7.125 MHz)
7.000 MHz
7.025
7.080
7.105
7.100
7.125 MHz
Current
CW (Extra)
CW (All)
ACDS
RTTY/Data
RTTY/Data DX 7.040
Proposed
CW (Extra)
CW (All)
ACDS
Narrow RTTY/Data
Wide RTTY/ Data
7.000
7.025
7.070
7.115
7.125

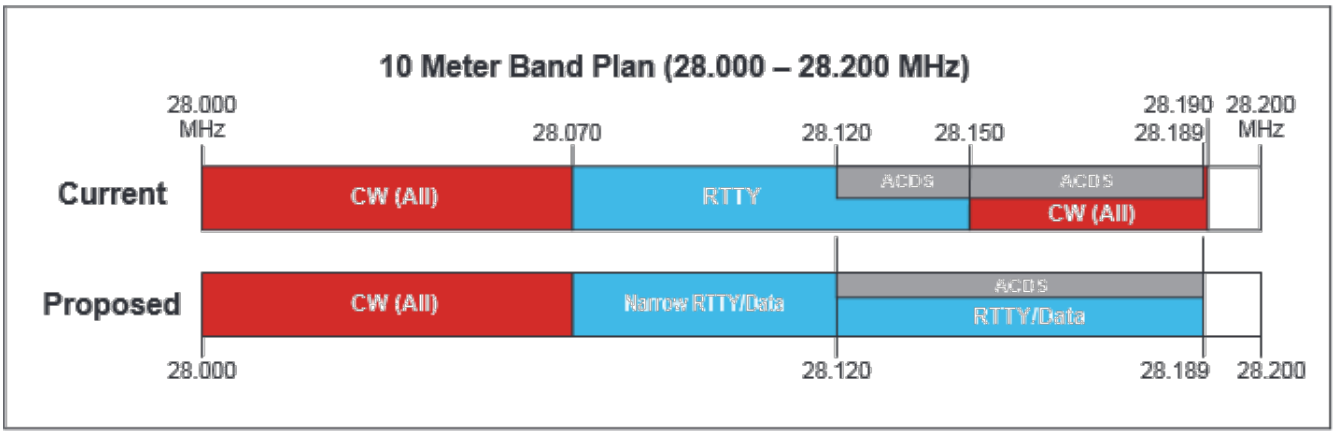

30 Meter Band Plan (10.100 – 10.150 MHz)
10.100 MHz
10.130
10.140
10.150 MHz
Current
CW (G,A,E)
RTTY
"Packet," ACDS
Proposed
CW (G,A,E)
Narrow RTTY/ Data
RTTY/Data, ACDS
10.100
10.150


20 Meter Band Plan (14.000 – 14.150 MHz)
14.000 MHz
14.025
14.070
14.095
ACDS "Packet"
14.112
14.150 MHz
Current
CW (Extra)
CW (G,A,E)
RTTY
Beacons 14.100 ±500 Hz
Proposed
CW (Extra)
CW (G,A,E)
Narrow RTTY/Data
RTTY/Data
14.000
ACDS Narrow
ACDS Wide
14.150


17 Meter Band Plan (18.068 – 18.110 MHz)
18.068 MHz
18.100
18.105
18.110 MHz
Current
CW (G,A,E)
"Packet," ACDS
RTTY
Proposed
CW (G,A,E)
RTTY/Data, ACDS
18.068
18.100
18.110
Narrow RTTY/Data


15 Meter Band Plan (21.000 – 21.200 MHz)
21.000 MHz
21.025
21.070
21.090
21.100
21.110
21.200 MHz
Current
CW (Extra)
CW (All)
RTTY/Data
ACDS
Proposed
CW (Extra)
CW (All)
Narrow RTTY/Data
RTTY/Data
21.000
21.200





From the ARRL paper, An Explanation of the Graphics above:
Only the "RTTY/data" subbands are depicted here. The "phone/image" subbands are not shown. CW is permitted throughout the bands. There is no impact on the current VOICE/IMAGE segments.
The following abbreviations are used:

ACDS: Automatically controlled digital stations (by FCC Rule; see §97.221(b))

CW (G, A, E): Segment available only to General, Advanced, and Amateur Extra class (by FCC Rule; see §97.301) **NOTE: CW means Narrow RTTY/Data such as FT8** (Bandwidth of no more than 500 Hz) or Morse Telegraphy. CW ALL does NOT mean "Technician" DATA, it only means CW for them.

"Packet": Current band plan specifies packet, but wider variety of data modes in use

RTTY/Data: Bandwidth up to 2700 Hz, otherwise limited by FCC Rule (see §97.307(f))

Wide RTTY/Data: Bandwidth 500 – 2700 Hz, otherwise limited by FCC Rule (see §97.307(f)) A maximum bandwidth of 2700 Hz for data emissions would be consistent with the IARU Region 1 and Region 2 band plans. 2,3,4 In the absence of an FCC-prescribed bandwidth limit, some limit on bandwidth is needed in the ARRL band plans.

FOR REFERENCE, SINCE ARRL CITES THEM:
IARU REGION 2 BAND PLAN:
Available at both links below:

http://www.hflink.com/bandplans/Region_2_MF__HF_Bandplan_Annex__1_2008.pdf
http://www.iaru-r2.org/documents/explorer/files/Plan%20de%20bandas%20%7C%20Band-plan/R2%20Band%20Plan%202013.pdf
IARU REGION 1 HF BAND PLAN:
http://www.iaru-r1.org/index.php/spectrum-and-band-plans/hf
IARU REGION 3 BAND PLAN:
http://www.radioamadores.org/biblio/iaru/R3-2015.pdf

3. BAND PLAN DISCUSSION CONCLUSIONS: Quoted from ARFSI Comments, PAGE 5:
"5. Needed: Control of Occupied Bandwidth Opponents fear incompatibility between wideband protocols in the same band space as very narrow ones. This is a justified concern. Capping maximum bandwidth for digital modes at 2.8 kHz as the ARRL proposed, is a good temporary measure until rebalancing of the digital band plans can be properly accomplished.
6. Conclusion... For now and for expediency in the absence of regulating our bands by bandwidth, we also agree with the ARRL and see the need for a 2.8 kHz bandwidth limitation on wide bandwidth digital signals."
Quoted from Steve Waterman 17-344 comments:
"For example, how much high-speed data at 2.4 KHz (Pactor 3) can be sent and received on the 40 Meter Part 97 spectrum totaling an allowable 5 KHz total? But what about about two, three or a **hundred such stations all operating simultaneously**?"
https://ecfsapi.fcc.gov/file/10123298305905/%2017-344.pdf

Adopting the ARRL HF band plan as recommended will provide for *legitimate emergency communications*, and protect it and other users from interference. Adopting a band width limit which allows wide band emissions everywhere *will not protect anyone from interference.* Adopting the FCC proposed *unlimited band width* inside certain band segments will *minimize future rule making*.

If the FCC chooses to continue to allow the *non-emergency* free HF email for yachts, the entire amateur spectrum will not be enough, and their statements above make it abundantly clear that the FCC will have *another contentious rule making very soon*, to confiscate even more amateur spectrum for an activity that belongs in the commercial spectrum. They characterize it as a "temporary measure". Adopting the ARRL HF band plan is a longer term solution that serves true emergency communications. **Eliminating commercial activity from the amateur spectrum is a more permanent solution.**

E. RECOMMENDED FCC ACTIONS:

1. I urge the FCC to revise or reject WT 16-239 as currently written, and parts of RM-11708, RM-11759 and to adopt the ARRL HF band plan proposal as far as it is conforming to world wide IARU band plan for ACDS segments which contain all email or automatic use.
2. The ARRL has failed to explain, as the current 16-239 provides, how a system like Winlink, which uses assigned channels on HF as its inherent design, can satisfy: 97.101 General standards. "No frequency will be assigned for the exclusive use of any station." While FM repeaters on VHF/UHF employ locally coordinated channels for its short range, this practice will not work on world wide HF in any implementation of automatic or "remote" control outside the ACDS segment. If permitted, email store and forward must be contained within an ACDS segment, just as the FM repeaters on 10 meters are, to be consistent with "good engineering and amateur practice".
3. There is nothing in the proposed rule making to prevent someone from "ganging" a group of 2.8 KHz transmissions together to get faster data transfer, which would occupy an entire HF DATA segment. With appropriate wording the FCC should prevent this from happening.
4. The ARRL has failed to explain how a world wide communication system like Winlink (which does

not cause immediate disconnect upon illegal content or unauthorized access in its inherent design) complies with: 97.105 Control operator duties (a) "The control operator must ensure the immediate proper operation of the station, regardless of the type of control." Winlink allows 97.219(d)(1) "unauthenticated" access with prohibited content to the system without an immediate disconnect feature for Randal Evans pirated call sign. Also unlicensed onshore third parties access it via internet email by simple insertion of //WL2K at the beginning of your subject line: http://www.arrl.org/ares-el?issue=2018-11-21#toc03

5. The FCC should direct Winlink to implement measures to fix the deficiencies noted above, for spectrum management as well as security reasons. Winlink and any other email store and forward systems must 97.219: "Authenticate the identity" and 97.105: "ensure the immediate proper operation of the station, regardless of the type of control."

6. The FCC current 16-239 includes contradictory and impractical methods that preserve transmission band width limits of 20 KHz on VHF and 100KHz on UHF while deleting all such limits on HF, which should be revised or rejected, as explained in this petition: https://ecfsapi.fcc.gov/file/1116853100153/petition2%20%20to%20dismiss%2016-239.pdf

7. It IS possible for the FCC to implement unlimited HF transmission band width, but ONLY if it confines it to ACDS segments, where it will not cause "congestion" in the separate DATA segment. That could be a simple solution, if provided in the new 16-239 revision.

8. RM-11759 includes license restructuring, yet ARRL has a new contradicting petition (no RM yet) for adjustment of Technician HF privileges. Reject that component of RM-11759 while adopting the band plan proposal component as part of the revised 16-239 to regulate by band segment.

9. In the interest of national security and rules compliance, the FCC should prohibit HF transmissions that are not clearly identified, and are not decodable for monitoring or enforcement, as one pending petition advises. Please consider adopting this petition as a rule: https://ecfsapi.fcc.gov/file/100918881206/PETITION%20FOR%20RULEMAKING.pdf
"To ensure that the amateur service remains a non-commercial service and self-regulates, amateur stations must be capable of understanding the communications of other amateur stations." http://transition.fcc.gov/Daily_Releases/Daily_Business/2013/db0918/DA-13-1918A1.pdf

10. Close the comments and act. There is nothing new to add.

11. If the FCC chooses to subsidize free email for blue water sailors, it should give more HF channels in the commercial spectrum to Sailmail free of charge to allow more connect time or promote better satellite internet service for under served populations.

Sincerely and respectfully,
/S/
Janis Carson, AB2RA, licensed since 1959, ARRL member 40 years

Please incorporate by reference these comments in this reply:
My previous comments, please incorporate by reference:
https://ecfsapi.fcc.gov/file/1012251185288/FCC%20PS%20DOCKET%2017-344.pdf
https://ecfsapi.fcc.gov/file/1022189744573/FINAL%20PSHSB%2017-344.pdf
https://www.fcc.gov/ecfs/filing/120762254440
https://ecfsapi.fcc.gov/file/10100754910405/MATTHEW%20PITTS%20REBUTTAL1.pdf

APPENDIX: Items triggered by ARSFI comments, which the FCC should consider action on separately from 16-239, because they get in the way of getting to "YES".

F. COMMERCIAL USE OF AMATEUR RADIO, WHAT TO DO:

1. The 16-239 commenters' objections point out the abuse of the amateur service for commercial traffic, to avoid charges for a service that is widely available for *non emergency* use. The evolution of this use from the initial FCC permission to order pizza on a 2 meter autopatch has now jumped off the rails; now we have boat repairs and parts, posting to Facebook, blogs and other pecuniary transactions. **It is clear that the FCC needs to revisit that decision.** This action is essential to prevent conversion of the amateur service into a personal messaging system for various special interest groups like liveaboard yacht owners unwilling to pay for Sailmail or Satphones, and RV owners unwilling to use the WI-fi in their campground. Ordering boat repairs or parts, reserving dock space or other travel reservations, blogging or posting to Facebook (which can be a source of revenue), or organizing yacht races (which can have a substantial prize) are demonstrably commercial in nature. Also, Facebook posts and blogging are a form of "**broadcasting**" as an end product of amateur radio, which is clearly prohibited in FCC rules. Downloading customized weather maps (gribs) generates significant traffic which belongs on commercial spectrum. *If the FCC desires to subsidize this activity for under served internet users, it should grant to Sailmail more channels without charge, or hold a spectrum auction for satellite phone development.*

2. **Most importantly, none of this content is legitimate emergency communication or relief work, as some commenters in the last month would have you believe.** In fact, if 16-239 proceeds as currently written, *it will generate more interference to the very emergency communications work it purports to promote.*

3. You can find information on potential commercial misuse of the new ARDOP mode at: http://www.ybw.com/forums/showthread.php?496951-Ardop-Vara-in-Winlink-Express-(email-by-radio)

"14-03-18, 10:33 #1
Roberto's Avatar
Roberto Location Lorient, just back from a second round Atlantic trip
Ardop/Vara in Winlink Express (email by radio)

A very interesting news for people using email by radio under a radioamateur licence: Winlink Express is being beta tested with two new protocols, Ardop and Vara; results are oustanding, transmissions speeds in the range of Pactor 3. A new stable Winlink express release should come soon, in the meantime should one wish to try it read here:

https://winlink.org/content/ardop_and_vara_now_beta_testing_winlink_software

Software is basically free, and very easy to use.

In plain words, if one holds an amateur licence, these systems allow to exchange email without a Pactor modem; this was already possible with Winmor, though with this update transmission speeds are a lot better.

Supposing one already has a pc, this means that by buying a secondhand hf transceiver, making a couple of dipoles, maybe adding an external soundcard, one can have an email capable radio station for around 5-600euro, no annual fees. Cost-wise, beat that

http://sybrancaleone.blogspot.com/

Reply 14-03-18, 11:50 #2
GHA
Location Hopefully somewhere warm

Re: Ardop/Vara in Winlink Express (email by radio)
Great, thanks for the link!
One of the better kit updates I did onboard was get the ham advance license (you need the top licence to allow for maritime mobile use) and fit an icom7000.
No more expensive sat airtime
Looks very interesting, even with winlink gribs were not a problem to download, just took a little while."

4. The Winlink web site shows very significant involvement with the maritime users. The FCC should note on the lower right hand of the Winlink home page lists the

"The 2000-2017 Platinum Club Gateway Sysops on-air in 2000, and on-air today!
California Yacht Club Radio Amateur Group, K6CYC, and Eric Oistad, KF6DZT
San Diego Yacht Club Amateur Radio Group, W6IM, and Rod McLennan, W6MWB"

5. A Pactor advocate says: http://www.pactor.com/

"17-FEB-2018: Use of PACTOR-4 is still questionable within US ham radio jurisdiction and is mostly used to transfer files (email, pictures, etc.) to private or public mailboxes outside the USA. PACTOR-4 remains a substitute for those unwilling to pay for mobile offshore internet."

6. Many of the early commenters in RM-11708 were blue water sailors, demonstrating the primary purpose of this free HF email is *NOT for emergency communications*. I wish to incorporate by reference (for brevity) these previous comments detailing the extensive involvement of Seven Seas Cruising Association, Winlink, and various maritime users:
https://ecfsapi.fcc.gov/file/10100754910405/MATTHEW%20PITTS%20REBUTTAL1.pdf
Those comments included this one: https://ecfsapi.fcc.gov/file/7521315143.pdf

"To: FCC – RM-11708 The sailing forms are all engouraging us to file comments in support of RM-11708. This is my first filing and if I mess this up, please see SailNet Forum at:
http://www.sailnet.com/forums/general-discussion-sailing-related/111746-us-citizens-urged-support-fcc-rm-11708-a.html
I have experienced very dependable service from the amateur radio Internet Winlink system. Its a great service because all of the other available Internet services cost money. Even when I am topside crusing the system runs automatically below deck publishing my position reports and downloading my email. I use the system for sending position reports, ordering supplies, repairs, chatting with friends and posting to facebook. My only complaint is that it needs to be much faster. I am not a amateur radio operator yet but a friend lets me use his call with a SIDD on the end. I hope to get my own ham call soon. From what I read on the sailing forums, RM-11708 will allow Winlink eMail to run twice as fast. That is great and I am for that. Some of the technical folks are saying that if RM-11708 is published with no bandwidth we can get even faster Internet and might be able to stream movies on the Winlink Internet. I'm for passing RM-11708 into law with no bandwdith limits." - Randal Evans

7. This is a clear failure to 97.219: "Authenticate the identity" and 97.105: "ensure the immediate proper operation of the station, regardless of the type of control." *Winlink can only monitor these transmissions after the fact,* and reprimand the offender, if they happen to have time to read all the outgoing messages, an unlikely occurrence in such an automated system. This was a failure to authenticate in the RF port of the Winlink email system. The failure in the case of the internet port, from automated internet email coming into the system is worse, since these users are not licensed amateurs and cannot be expected to know or follow FCC part 97 rules on content or valid third party country destinations of traffic.

8. The commercial misuse of the amateur service could be from an individual or a group of users who pool their resources, not just the Winlink emergency operations ARSFI seems to defend.

This situation is unsustainable and out of step with IARU agreements as well as “accepted standards” the FCC has traditionally held in the past. Now, 16-239 allows the following situation, quoted from page 53, English version, **SCS Pactor 4 modem manual**:
http://www.p4dragon.com/download/InstallationGuide_DR-7X00.pdf

> “2.1 SCSmail: SCSmail has been developed to enable users of SCS PACTOR modems to easily establish an own email system without additional costs. SCSmail is freeware and will be distributed via the SCS CD and the SCS website. It is not the intention of SCSmail to replace or to interfere with existing professional HF email providers with their highly sophisticated solutions and services. Its purpose is just to give private users and small organizations the chance to quickly install an own, private email service without additional costs and without the need to subscribe to an existing provider and with this being dependent from an external service.”

9. This means ANY person, group of people, or organization can operate a free HF email service in addition to Winlink, ARRL, or emergency communicators. An individual, a yacht club, or group of yacht owners could have free HF email in the amateur spectrum without ANY connect time limits, without any authentication or content monitoring measures. This would inevitably be in the amateur spectrum, because it is illegal to use other spectrum without paying the FCC for an allocation and call sign for its use. You could even do stock trading like this: “IARUMS has received reports of short "beeps" exactly 1 second apart, as well as frequency hopping between 10,108 and 10,115 kHz and 18,834 and 18,899 kHz. The signals are believed to emanate from a site near Chicago associated with an FCC-licensed experimental operation involved with low-latency exchange trading on HF (see "Experiments Look to Leverage Low-Latency HF to Shave Microseconds off Trade Times"). Although Amateur Radio is secondary on 30 and 17 meters, Experimental licenses may not interfere with Amateur Radio operations.” Remember, unlimited band width data is just DATA; its all perfectly legal. Its certainly pecuniary, and *NOT a public service or emergency communications*.
Despite the stated credentials of the filers,
https://www.fcc.gov/ecfs/filing/12070210003806
https://www.fcc.gov/ecfs/filing/1207114347495
they have not demonstrated that they have done any kind of credible system audit, nor does it appear from this kind of vulnerability shown above that the problems are insignificant, as they assert.

10. The FCC must weigh in 16-239 whether the “cost” of permanent loss of spectrum access of 750,000 legally licensed amateur operators for the “benefit” of roughly 12,000 yacht owners free HF email is “in the public interest” or proper. *Do NOT confuse this with legitimate emergency communications.*

> 97.113 Prohibited transmissions.
> (a) No amateur station shall transmit:
> (3) Communications in which the station licensee or control operator has a pecuniary interest (*like the prize in a yacht race, buying boat parts or hiring repairs, or other business travel arrangements)*
> (5) Communications, on a regular basis, which could reasonably be furnished alternatively through other radio services *(like Sailmail)*
> (b) An amateur station shall not engage in any form of broadcasting (*such as a blog or Facebook post*)

11. The FCC really needs to take a hard look at the appropriateness of these free HF email store and forward or unknown data uses, *apart from legitimate emergency communications.* The legitimate emergency communications operations should be in the hands of a competent supervising government agency, such as the case with RACES or SHARES, as the “anonymous” filer in 17-344 recommended. Those needs are served by adoption of the ARRL HF band plan as recommended in this document. The non-emergency spectrum demands cannot be satisfied even if ALL of the amateur spectrum is taken; it belongs in the commercial spectrum, such as Sailmail.

G. SHOULD AMATEUR RADIO BE SELF MONITORING?

1. Whether ARQ mode operation of SCS Pactor 4 modems or ARDOP or any other new mode can be monitored is a whole separate topic evolved out of 16-239. If the FCC wishes to retain the ability for amateurs to self monitor, it may choose to consider measures to ensure that in a separate action. There is a petition recently filed that addresses that separate issue:
https://ecfsapi.fcc.gov/file/100918881206/PETITION%20FOR%20RULEMAKING.pdf
However, if the FCC chooses not to retain the self monitoring nature of the amateur service, it should definitely provide a segment where the users of these new automatic email store and forward emissions can operate safely without interference from non email locally controlled peer to peer users who are unable to identify if the transmissions are legitimate emergency communications or other free HF email. If transport of pecuniary or nefarious content occurs, the responsibility is no longer on the amateur community, it is on the operators of these free HF email services and the agencies who are responsible for monitoring. If they do not possess the tools or manpower to do so, it is indeed unfortunate if there are consequences which might have been avoided. In today's world, our technology can be used against us. This appears to be a departure from previous FCC policy (RM-11699, DA 13-1918) as stated in paragraph 6:
http://transition.fcc.gov/Daily_Releases/Daily_Business/2013/db0918/DA-13-1918A1.pdf
"The primary protection against exploitation of the amateur service and the enforcement mechanism in the amateur service is its self-regulating character"... "To ensure that the amateur service remains a non-commercial service and self-regulates, amateur stations must be capable of understanding the communications of other amateur stations."
Footnote 19: "We note that a hallmark of enforcement in the amateur service is "self-policing," which depends on an amateur station hearing a message being able to determine whether message violate the amateur service rules. See, e.g., Waiver of Sections 97.80(b) and 97.114(b)(4) of the Amateur Rules to Permit the Retransmission of Third-Party Traffic in Certain Situations, Order, PR Docket No. 85-105, 59 Rad. Reg. (P & F) 1326, 1326 ¶ 2 (PRB 1986)."

2. The only true method to end "He said, they said" hearsay discussions and answer the question: "YES OR NO: Will this device or any device/software decode any compressed ARQ mode as currently used in the amateur radio bands?" is to request the FCC (Laura Smith) perform a test of an SCS modem or other email store and forward methods, to verify if it can or cannot decode off air live ARQ mode transmissions.

3. Can we afford the "cost" if we ignore the possible consequences of failing to guarantee that *non-emergency communications* conducted in the amateur spectrum are monitored to ensure compliance with FCC rules and rational safety considerations? Are the "benefits" of such *non- emergency* free HF email store and forward systems sufficient to justify that "cost"? That answer is up to the FCC and other government agencies responsible for protecting the public interest.

5. ARSFI COMMENTS PAGE 6: "Users outside of Winlink can use Pactor modems with it's proprietary compression. In this case they join the ranks of other permitted systems like D*Star, Fusion, DMR (DVI voice codec) and a few others. To our knowledge none of these other systems using proprietary codecs or compression— and that are hard to intercept by a layman without proprietary equipment or software—have been challenged as a threat to national security."

6. Users outside of Winlink can set up their own private network, without outside scrutiny, and send whatever traffic they wish. SCSmail is an advertised feature, discussed in my paragraph F, 8 & 9.

7. D-STAR is not used in the 16-239 DATA segments and not applicable to this proceeding. Furthermore, it is a band width hog on HF at 6 KHz for poor quality voice transmission compared to 3 KHz for SSB. France has banned D-STAR for security concerns. https://en.wikipedia.org/wiki/D-STAR
Bruce Perens has pioneered an open source non proprietary, freeware, digital voice product that only occupies 1.1 KHz. That is "innovation" the FCC should promote. https://freedv.org/